Overcoming financing constraints to corporate expansion: evidence from a company in an emerging Islamic market

Article (Published Version)

Overcoming financing constraints to corporate expansion: evidence from a company in an emerging Islamic market

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The sourcing of low-cost finance to facilitate corporate expansion on competitive terms is a major challenge to firms from emerging markets. There are additional constraints in Islamic markets as financial instruments must adhere to *shari'ya* law. This paper examines the approach taken by the Sudan Telecommunications Company (Sudatel) to obtain cost effective equity financing using secondary listings on multiple Middle East and North Africa (MENA) stock exchanges. We compare the costs of equity for Sudatel stock on the Sudan and Abu Dhabi Exchanges, and compare these figures with those for Sudatel's two main regional competitors. Furthermore, we highlight the risk-return trade-off faced by investors in Sudatel stock on both Exchanges, and provide evidence of the potential benefits to investors from the overseas listing.

Key words: Islamic finance; emerging market finance; Sudan
JEL classification: N25, O16, P45

1. Introduction

The emergence of successful transnational corporations (TNCs) from developing and transition economies is a relatively recent phenomenon (Dunning et al., 1998; Sauvant, 2005; UNCTAD, 2006). However, much of the literature tends to focus on TNCs from Asia (see, for example, Lau, 2003; Buckley et al., 2007, Filatotchev et al., 2007) Latin America (Chudnovsky and López, 2000) and the transition economies of Eastern Europe (Svetlicic, 2004) and little is known about African TNCs. This group typically face many barriers to foreign expansion, for example protectionism in potential overseas markets, a lack of firm-specific technological and managerial skills, and difficulties in raising reliable, low-cost finance. This paper focuses on

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this last issue, and considers how a TNC can access sufficiently cheap capital to facilitate profitable overseas expansion. Financial markets in emerging economies are both small and illiquid, and potential domestic and foreign investors are discouraged by low returns and high volatility, resulting in a high cost of equity. Furthermore, firms based in Islamic economies face the additional constraint that financing must be compliant with *shari'ya* principles, which place strict conditions on the nature of financial instruments available to domestic companies. Balance sheet liabilities in the form of debt, including loans, securitized bonds or interest-bearing certificates, as well as certain asset provisions, such as fixed-term deposits or government bonds, are not available. These financing constraints provide additional challenges to TNCs with ambitious expansionist plans.

The paper is structured as follows. In section 2, the principles and key features that characterize Islamic financial markets are briefly reviewed, and the essential differences between Islamic and Western markets are highlighted. Many Islamic markets operate a dualistic approach in trading both Western and Islamic financial products, and Sudan and Iran are the only countries in the Middle East and North Africa (MENA) region to adhere exclusively to *shari'ya* directives relating to corporate capital structure. This paper thus focuses on the Sudan market and, in particular, on the case of the Sudanese Telecommunications Company (Sudatel) which has been pursuing a programme of expansion across Africa and the Middle East. Sudatel provides an apposite case to consider the effects of finance constraints because its major competitors – the Kuwaiti firm, Zain, and the Eqyptian firm, Orascom – in the MENA markets have both raised capital through Western financial instruments, and both have much lower costs of capital. The recent history of Sudatel's expansion is outlined in section 3, together with information about the company's sources of finance. Section 4 highlights the important characteristics of the national stock exchange in Khartoum and the other stock exchanges in the MENA region on which Sudatel is listed. The data sources and methods used to measure the cost of equity and the transactions costs are discussed in section 5. The results in section 6 show that there are benefits to raising finance on the Khartoum and Abu Dhabi Stock Exchanges, and that there is the potential for investors to diversify risk by holding a combination of Sudatel stock with others listed on a selection of MENA markets. Such a strategy provides a benefit to the firm, which may be a good model for other TNCs from emerging Islamic economies. The policy implications are discussed in section 7. The final section concludes.

2. Islamic financial markets

The Islamic financial system is founded on a set of principles *(shari'ya*, or *shariah*) that govern the economic, social, ethical and religious aspects of an Islamic society (Iqbal, 1997). Whereas Western financial systems concentrate primarily on the economic and financial aspects of transactions, the Islamic system embraces wider concerns of social justice and equality. The basic principles of the system are fivefold. The first is the prohibition on the payment of any fixed, predetermined rate of return on a financial transaction, that is, a return that is guaranteed regardless of the performance of the investment. This effectively rules out the charging of interest (*riba*), and the use of debt-based financial instruments. As Iqbal (1997, 43) notes, "Islam encourages the earning of profits but forbids the charging of interest because profits, determined *ex post*, symbolize successful entrepreneurship and creation of additional wealth whereas interest, determined *ex ante*, is a cost that is accrued irrespective of the outcome of business operations and may not create wealth if there are business losses. Social justice demands that … the process of wealth accumulation and distribution be fair and representative of true productivity". The second is profit-and-loss sharing, which requires that all suppliers of funds share the risks on any business venture in return for a share of the profits from the enterprise (Aggarwal and Yousef, 2000). The third is the prohibition on speculative behaviour *(gharar*) (El-Din and El-Din, 2002; Metwally, 1984). The fourth is the sanctity of contracts, with contracts upheld both in spirit and according to the letter of the law. Partners are expected to share relevant information, and to contribute wholeheartedly to the success of the venture. The final principle is that investment in certain activities, for example, those concerned with gambling or alcohol is prohibited.

These principles have given rise to a range of distinctive Islamic financial instruments, which include partnership (*musharaka*), profit-sharing agreements (*mudarabah*), leasing (*ijara*), and cost-plus financing (*murabaha*). The first two instruments are widely used for long-term financing,[1] whilst the latter two are used more for short-term

[1] *Mudarabah* contracts involve banks providing capital while the entrepreneur contributes effort and retains complete control over the business venture. In the event of a loss, the bank earns no return and correspondingly the entrepreneur receives no compensation for effort. If the project is successful then the gains are equally split between the parties according to a pre-transaction negotiated percentage formula. The principle of *mudarabah* contracts can also be extended to individuals placing deposits with banks and receiving a pre-specified return from the proceeds of these deposits (Kuran, 1986). In *musharaka* contracts, the bank and the entrepreneur jointly supply capital as well as exercise control and supply management expertise to the project.

financing.[2] The critical difference between these finance instruments and those prevalent in Western markets is that the emphasis in both their design and use is that of partnership and a sharing of the responsibility and risks immediately incurred from the management of industrial projects. As a consequence, the financier is implicitly expected to undertake an equal role alongside the entrepreneur in the management of the company, even if this role is largely relegated to being a sleeping partner. *Musharaka* contracts are also common in Islamic venture capital financing, where longer-term partnerships and the active involvement by the venture capitalist in the management of the firm are considered critical to success (Suwailem, 1998). Two further less common instruments are *mugawla* and *salam* financing.[3] In addition, firms in Islamic markets are subject to *zakat* as well as standard taxation; *zakat* is explicitly mentioned as one the five central pillars of Islam (Kuran, 1986), and is collected to facilitate the equitable redistribution of income and wealth.

Clearly, there are basic differences between Islamic financial markets and those in the West. First, the ban on *riba* not only prohibits debt as a source of capital but also means it is not appropriate to use any of the standard models in finance theory to calculate the cost of

Losses are in proportion to the individual capital contributions of the two parties while profits are negotiated freely (Aggarwal and Yousef, 2000). Aggarwal and Yousef (2000) loosely contrast *mudarabah* instruments to a limited partnership and *musharaka* contracts to a traditional equity stake with additional rights of control.

[2] *Murabaha* contracts involve the bank purchasing an asset (e.g. production equipment) on behalf of the entrepreneur. The bank resells the asset to the entrepreneur at a predetermined price that covers the original cost and an added, negotiated profit margin. Payment is made either by a future lump-sum cash redemption, or in instalments, and full ownership over the tangible assets resides with the bank until all outstanding payments have been made. *Ijara* financing is commonly used in more specialist applications such as industrial leasing. Contracts are formed where the bank again purchases the tangible assets and allows the entrepreneur to use it for a fixed charge. Ownership of the asset either remains with the bank or is gradually transferred to the entrepreneur in a rent-to-own contract (Aggarwal and Yousef, 2000). Although the use of such instruments is permitted, there are concerns about whether such instruments, in providing a fixed return to the bank, are similar to debt contracts and are thus inconsistent with *shari'ya* principles. See Kamali (2007) for a discussion of *ijara* instruments and their regulation.

[3] *Mugawla* financing involves a contract between the party undertaking a work-related function and the owner of the project providing the capital (including materials). The price of the work under contract and the terms of payment must be specified at the outset, and payment may be made in advance, after completing the work, or in instalments as the work progresses. *Salam* financing is common in the agricultural sector where a contract is made between the supplier of fungible goods and the financial institution acting on behalf of the ultimate buyer. The key objective of this contract is to fix a price for a delivery of goods at a fixed future date (Mannan, 1993).

capital. For example, the Capital Asset Pricing Model (CAPM) requires a risk-free rate of return, which does not exist. Second, the acquisition of superior information that can be used to benefit firms and investors is an acceptable practice in Western markets, provided that the information is not obtained from by insiders. Firms seek to retain confidentiality over certain aspects of their activities, while market analysts seek to elicit this information through in-depth research (Naughton and Naughton, 2000), hoping to use this before other market participants. In contrast, disclosure of information is considered a moral duty in Islamic markets, to mitigate issues of information asymmetry, moral hazard and incomplete contracts (El-Din and El-Din, 2002). On one hand, this lessens the scope for agency conflicts and promotes greater efficiency but, on the other, it may discourage investments by institutional investors who rely on superior information in order to gain an advantage. Thus, Western markets typically exhibit weak-form efficiency, a condition on which the CAPM is based, whereas the degree of information disclosure in Islamic markets suggests indirect strong-form efficiency (Fama, 1970).[4]

A third difference concerns speculative activity (*gharar*). In Western markets, moderate levels of speculative activity are regarded as essential to maintaining market equilibrium and to allow prices to reflect available information, that is, weak-form efficiency (Fama, 1970). The Western model assumes incomplete contracting, and a price discovery process facilitated by appropriate regulations regarding disclosure requirements and supported by arbitrage activity. In contrast, the Islamic model does not favour speculative and arbitrage activity, requiring a single entity to interface with the market (Mannan, 1993). One implication is that small shareholders do not play a significant role in Islamic securities markets, as their interests are likely to be short-term gains rather than lower-return social projects. In consequence, most share exchanges take place between large blockholders. Finally, there is a difference in the nature of the equity contract itself. In the West, it is generally agreed that the contract provides an entitlement to ownership of a firm in a legal environment that enables third party contracting and investment. In contrast, Islamic economists prescribe a system, reinforced by Islamic commercial jurisprudence, based on risk-sharing partnerships on an individual basis (Kuran, 2004). One consequence is that the modern Middle Eastern business environment is dominated by small and family-owned firms, with larger companies

[4] However, Onour (2002) found little evidence of weak, semi-strong, or strong-form efficiency using Khartoum Stock Exchange data.

being either foreign TNCs, foreign joint ventures or privatized state-owned enterprises.

In short, an exclusive reliance on Islamic financial instruments is likely to raise the cost of capital above that of firms which avail themselves of both Western and Islamic financial instruments. The cost of capital will be further raised in small and illiquid markets. These propositions will be examined below in the context of the Sudan Telecommunications Company (Sudatel).

3. The Sudan telecommunications company

The Government of Sudan adopted free trade policies and introduced a denationalization policy to revitalize the moribund national corporations in the early 1990s. One of the first sectors to be reformed was the telecommunications industry and, in October 1997, the shares of the State-owned National Wire and Wireless Corporation were listed on the Khartoum Stock Exchange, and the corporation was renamed the Sudan Telecommunications Company (Sudatel). The Government initially retained a majority controlling shareholding of 66.7%, and there were just 39 shareholders. Sudatel obtained secondary listings on the Bahrain[5] and Abu Dhabi Stock Exchanges in November 2000 and January 2003 respectively. These secondary listings enabled the Government to reduce its shareholding to 26% by 2005, with the remaining 74% distributed between 10,000 private shareholders.

The company initially pursued a vertical integration strategy, taking substantial cross-holdings in Saudi Arabia's Arab Submarine Cables Company to gain access to Arabian and Gulf region markets, and the Electronic Banking Services Company that specialized in payment systems. There were also a number of domestic Sudanese companies involved in satellite and mobile communications technology engineering (Sudatel Financial Statements, 2007). Additional services range from internet provision to remote high schools to the introduction of university distance learning programmes and other outreach activities in the education sector. Major projects such as the completion of an undersea communication cable under the Red Sea between Sudan and Saudi Arabia have been undertaken in combination with technical assistance from overseas partners such as British Telecommunications and the French company Alcatel (Sudatel website, 2008). The strategy,

[5] Sudatel was the first non-GCC (Gulf Cooperation Council) company to obtain such a listing.

combined with implicit government and legislative support, further reinforced the monopoly position of the company, which completely dominated the domestic market.

More recently, Sudatel has begun to expand overseas across the Sahel and Maghreb regions of Africa. Many African countries have recently experienced a phenomenal growth in demand for mobile and telecommunications technology in what were previously immature and unsaturated markets. Between 2007 and 2008, Africa experienced a 40% increase in subscriptions to mobile technology, with the greatest increases in the West (50%), East (48%), Central (45%) and Northern (41%) regions, with the Southern region (18%) rather behind (Africa and Middle East Telecom week, 2008). Furthermore, many of these telecommunications markets had been deregulated and former State-owned enterprises had been privatized. Sudatel expanded into Mauritania through a US$105 million acquisition of the controlling shareholding (60%) and the operating license of Chinguitel Telecom Company, followed by a successful bid in 2007 of US$200 million for a license in Senegal. Further expansion across West Africa has continued in 2008, raising US$1.75 billion in additional equity capital by bonus and rights issues in Abu Dhabi and Bahrain (Al Zawya, 2008) and the establishment of a holding company, Expresso Telecom, which in turn owns Ghana's Kasapa Telecom (Sudatel Management Report, 2008). Additional bids during 2008 have been submitted for a Niger mobile phone company as well as telecommunications operators in Nigeria and the Democratic Republic of Congo (Reuters, 2008).

But Sudatel also faces significant competition in its overseas expansion plans, notably from Zain and Orascom – see table 1. Zain, formerly the Mobile Telecommunications Company of Kuwait, dominates many markets across Africa and the Middle East, and is able to source equity finance through its primary listing on the large and liquid Kuwait Stock Exchange. Similarly, the Orascom Corporation has financed its regional expansion through a combination of a primary equity listing on the Egyptian Stock Exchange, and a secondary listing on the London Stock Exchange. The ability to raise large amounts of equity finance at cheap rates is a critical determinant, both in terms of implementing expansion strategies and of accessing geographic regions for which operating licences are affordable and sought (Al Zawya, 2008).

Table 1. Foreign affiliates owned by Sudatel, Zain and Orascom, 2007

Market	Sudatel (Sudan)			Zain (Kuwait)			Orascom (Egypt)		
	Firm	Ownership	Mkt. Share	Firm	Ownership	Mkt. Share	Firm	Ownership	Mkt. Share
Panel 1: North African Markets									
Sudan	Sudatel	100	51%	Zain (formerly Sudatel – Mobitel)	100%	49%	-- --	-- --	-- --
Algeria	-- --	-- --	-- --	-- --	-- --	-- --	Djezzy	96.81%	63.2%
Tunisia	-- --	-- --	-- --	-- --	-- --	-- --	Tunisiana	50.00%	49.1%
Egypt	-- --	-- --	-- --	-- --	-- --	-- --	Mobinil	28.75%	47.4%
Panel 2: Sub Saharan African Markets									
Burkina Faso	-- --	-- --	-- --	Zain Burkina Faso	100%	57%	-- --	-- --	-- --
Chad	-- --	-- --	-- --	Zain Chad	100%	60%	-- --	-- --	-- --
Dem. Rep. of the Congo	-- --	-- --	-- --	Zain DRC SARL	98.50%	41%	-- --	-- --	-- --
Congo	-- --	-- --	-- --	Zain Congo	90%	76%	-- --	-- --	-- --
Gabon	-- --	-- --	-- --	Zain Gabon	90%	63%	-- --	-- --	-- --
Kenya	-- --	-- --	-- --	Zain Kenya	80%	33%	-- --	-- --	-- --
Malawi	-- --	-- --	-- --	Zain Malawi	100%	68%	-- --	-- --	-- --
Niger	-- --	-- --	-- --	Zain Niger	80%	74%	-- --	-- --	-- --
Sierra Leone	-- --	-- --	-- --	Zain S.L	100%	45%	-- --	-- --	-- --
Uganda	-- --	-- --	-- --	Zain Uganda	100%	32%	-- --	-- --	-- --
Zambia	-- --	-- --	-- --	Zain Zambia	88.88%	79%	-- --	-- --	-- --
United Rep. of Tanzania	-- --	-- --	-- --	Zain Tanzania	60%	39%	-- --	-- --	-- --
Madagascar	-- --	-- --	-- --	Zain Madagascar	100%	32%	-- --	-- --	-- --
Nigeria	Intercellular	75%	-- --	Zain Nigeria	65%	29%	-- --	-- --	-- --
Ghana	Kasapa Mobile	under negotiation	3.8%	Western Telesystems Ltd.	75%	-- --	-- --	-- --	-- --
Mauritania	Chinguitel	60%	-- --	-- --	-- --	-- --	-- --	-- --	-- --
Senegal	Expresso	100%	33%	-- --	-- --	-- --	-- --	-- --	-- --
Zimbabwe	-- --	-- --	-- --	-- --	-- --	-- --	Telecel Zimbabwe	100%	-- --
Panel 3: Middle East and World Markets									
Kuwait	-- --	-- --	-- --	Zain MTC	100%	57%	-- --	-- --	-- --
Jordan	-- --	-- --	-- --	Zain Jordan	96.52%	43%	-- --	-- --	-- --
Iraq	-- --	-- --	-- --	Zain Iraq	30%	70%	OIH (Iraq)	100%	-- --
Bahrain	-- --	-- --	-- --	Zain	56.25%	44%	-- --	-- --	-- --
Lebanon	-- --	-- --	-- --	MTC Lebanon	-- --	50%	-- --	-- --	-- --
Saudi Arabia	-- --	-- --	-- --	Zain Saudi Arabia	25%	-- --	-- --	-- --	-- --
United ArabEmirates	Expresso Group	100%	-- --	-- --	-- --	-- --	-- --	-- --	-- --
Pakistan	-- --	-- --	-- --	-- --	-- --	-- --	Mobilink	100%	36.4%
Bangladesh	-- --	-- --	-- --	-- --	-- --	-- --	Bangalink	-- --	21.6%
Dem. People's Rep. of Korea	-- --	-- --	-- --	-- --	-- --	-- --	CHEO	75%	-- --

Source: Consolidated Financial Statements (December 2007) Mobile Communications Company KSC, Kuwait. Annual reports for Sudatel obtained from Abu Dhabi stock exchange and Orascom (Egypt) from Thomson.

At the end of 2007, the Sudatel balance sheet was dominated by equity (see Table 2). Total assets were US$2,443m, of which US$1,791m (73%) was financed by equity. Current liabilities were US$298m, and non-current liabilities US$354m. The major part of these liabilities relates to Islamic financial instruments, in particular 98% of the non-current liabilities. Much of this Islamic finance share is tied up in murabaha contracts, which relate to the "property, plant and equipment" in the balance sheet. The extension of murabaha financing for equipment was in the form of collateral deposits. Some of the finance for the recent overseas expansion was obtained through banks. The Sudanese Al Salam bank provided a shari'ya compliant "loan" repayable in six equal "profit" instalments of US$40 million commencing three years after the Chinguitel acquisition. Similar facilities have been sought to finance the expansion into the other Maghreb and West African markets. But most of the additional financing has come from the secondary listings.

Table 2. Sudatel's consolidated balance sheet, end 2006 & end 2007
(Millions of dollars)

	2007	2006
ASSETS		
Non-current assets	1,662	1,366
Current Assets	781	951
TOTAL ASSETS	**2,443**	**2,317**
EQUITY AND LIABILITIES		
Equity	1,790	1,971
Minority interests	1	2
	1,791	**1,973**
Non-current liabilities	**354**	**106**
of which, non-current portion of Islamic finance	348	103
Current liabilities	**298**	**238**
of which, zakat provision	40	44
current portion of Islamic finance	97	121
	298	**238**
TOTAL LIABILITIES	**652**	**344**
TOTAL EQUITY AND LIABILITIES	**2,443**	**2,317**

Source: Abu Dhabi securities exchange website

The secondary listing in Abu Dhabi allowed Sudatel to raise additional capital and achieve much higher levels of liquidity for its stock – see table 3 – increasing the attractiveness of the firm to foreign

investors. The Abu Dhabi securities exchange, in line with most MENA securities markets, supports trading in both contemporary Western financial instruments as well as those that are Islamic shari'ya compliant. An analysis of the holdings of the stock listed in Abu Dhabi shows that over 70% of the shares are held by Arabs from outside the Gulf Cooperation Council (GCC) region. Furthermore, the free-float market capitalization ratio for this stock is extremely low (under 5%) indicating the presence of major blockholders as opposed to a more diversified ownership base comprising retail and institutional investors. In contrast, the secondary listing in Bahrain exhibits quite different characteristics from that of Abu Dhabi. The market capitalization of this listing is only a fraction of the primary listing in Khartoum and the secondary listing in Abu Dhabi, and the turnover ratio is consistently zero. This lack of trading suggests that the intention behind this listing was fundamentally different from that in Abu Dhabi. It is likely that the strategy behind the Bahrain listing was to attract high net-worth individual Arab investors through the provision of a possible investment exit strategy. The listing would provide investors with high quality information, such as annual reports and interim financial statements, disseminated through the exchange, together with a route through its own marketing and education campaigns that act as a ready source of buyers should longer term investors seek to sell their stock.

Table 3. Listed Sudatel Stock, 2003–2007

	2003	2004	2005	2006	2007
Market Capitalization (millions of dollars)					
Khartoum	589.08	946.48	1,743.01	1,610.87	1,551.18
Bahrain	-- --	-- --	131.25	130.36	130.36
Abu Dhabi	1,123.30	1,640.03	2,653.04	2,283.37	2,388.76
Traded Value (millions of dollars)					
Khartoum	-- --	97.165	-- --	126.16	131.45
Bahrain	-- --	-- --	0.00	0.00	0.00
Abu Dhabi	20.31	165.84	1,106.21	442.99	503.59
Turnover Ratio (%)					
Khartoum	-- --	10.26%	-- --	7.83%	8.47%
Bahrain	-- --	-- --	0.00%	0.00%	0.00%
Abu Dhabi	1.81%	10.11%	41.70%	19.40%	21.08%

Source: Compiled by the authors from the Arab Monetary Fund, Khartoum, Bahrain and Abu Dhabi Stock Exchange websites

4. The MENA securities markets

The MENA securities markets are characterized by their small size relative to GDP and illiquidity, with trading concentrated in a small

number of blue-chip stocks, shown in table 4. All are based on the institutional design of contemporary Western financial markets although many have a separate Islamic segment where *shari'ya* compliant instruments are traded. The Saudi Arabian Tadawul Stock Exchange is the largest and accounts for over 43% of the region's total market capitalization. The Kuwait Stock Exchange ranks second and accounts for 16% of the region's market capitalization and has the highest ratio of market size to GDP and the highest turnover. In contrast, the four North African markets of Algeria, Egypt, Morocco and Tunisia together only account for 12% of listed capital in the region. Markets with the lowest market capitalization to GDP ratios are Iraq, Tunisia, Sudan, Algeria and Lebanon. In these countries, business finance is dominated by their national banking sector. For instance, the Bourse de Tunis only provided 5% of the funds needed by local businesses in 2007 (Bourse de Tunis, 2008) and the Stock Exchange in Algeria attracted three listings since its establishment in 2003. This exchange is not regarded locally as a significant capital-raising venue.

Table 4. The importance of selected MENA stock exchanges, 2005

Stock Market	Established	Market capitalization (millions of dollars at 2005 prices)	Market capitalization as percentage of GDP	Turnover ratio (%)
Saudi Stock Market	2007	157,306.44	73.35	10.08
Kuwait Stock Exchange	1962	59,528.01	142.58	10.55
Abu Dhabi Securities Market	**2000**	**30,362.51**	37.85	0.46
Egypt (Alexandria/ Cairo)	1888/1903	27,847.48	39.26	1.81
Doha Securities Market	1997	26,702.11	130.73	1.36
Dubai Financial Market	2000	14,284.23	17.81	1.95
Bourse de Casablanca	1929	13,050.18	29.48	4.31
Amman Stock Exchange	1999	10,962.98	110.19	3.55
Bahrain Stock Exchange	**1989**	**9,701.77**	100.99	0.27
Muscat Securities Market	1988	7,246.23	33.56	1.49
Iraq Stock Exchange	2004	2,686.94	3.06	0.48
Bourse de Tunis	1969	2,439.55	9.07	1.03
Khartoum Stock Exchange	**1995**	**746.56**	3.92	1.31
Algeria Stock Exchange	2003	143.64	0.22	0.01
Beirut Stock Exchange	1920	0.99	0.01	0.60
TOTAL MENA		363,009.62		

Source: Compiled by the authors from national stock exchange websites and the Arab Monetary Fund.

Note: (1) Exchanges highlighted in bold are those that act as outlets for dual-listed Sudanese assets.
(2) The data on Iraq are collected direct from the exchange website.
(3) Although the Saudi stock market existed in an informal capacity since early 1990s, the Tadawul stock exchange was only established in 2007

The Sudan Stock Exchange in Khartoum is the primary source of equity finance for domestic Sudanese firms, and it has witnessed a steady growth in both listings and activity since its establishment in October 1994 – see table 5. Listings have risen from 34 in 1995 to 48 in 2004, and increased further to 52 in 2008. Nevertheless, the Exchange has a low market capitalization, both in absolute terms and as a percentage of GDP. A secondary equity market was established in January 1995, but was further split into organized and parallel markets in 1999, with regulation regarding disclosure requirements significantly lighter on the latter in order to attract a wider range of smaller firms. Additional formal market segments also exist for exchange traded funds and Government musharaka and shihama certificates.[6] In addition to the formal exchange-based markets, there is also a smaller over-the-counter market operated outside exchange trading hours between brokerage companies licensed by the Bank of Sudan, where orders are relayed via the local telephone network.

The Khartoum equity market is highly concentrated with Sudatel dominant in terms of market capitalization (63%) and trading activity (74%) in 2004.[7] The 1997 Sudatel listing resulted in an increase in total market capitalization from US$32 million to US$139 million in a month. During 2004, the Sudatel stock was traded on all 244 working days, whilst the next-highest turnover ratio (11.44%) was that of Sudanese Free Zones & Markets, which traded for 44 days. Other stocks, such as Gum Arabic Company and the Sudanese Islamic Investment Bank, were frequently traded at 79 days and 56 days, respectively, but these lacked size and value. Table 5 demonstrates that the value of primary market issues has, with the exception of the three years between 1996

[6] *Shihama* certificates are a form of equity-based financial instrument, introduced by the Central Bank of Sudan in 1998. They are mainly used to generate finance for central government projects, with the government selling shares in companies that it (partially or completely) owns. *Shihama* certificates are profit-and-loss sharing agreements, but are redeemable on request even though the holders are theoretically permanent partners. The *shihama* certificates are issued both through periodic Bank of Sudan auctions as well as on the Khartoum Stock Exchange, where they collectively accounted for 25% of traded value in 2004. There is also considerably less concentration of trading activity, indicating a higher degree of liquidity than with other market segments.

[7] The local market also has a highly concentrated brokerage industry with one broker. The Financial Investment Bank was established in 1997 through a government initiative to assist domestic stock market investment and accounts for 86% of the capitalisation of the brokerage industry. Brokerage is dominated by government control and lacks sufficient capitalisation for market development. This is a serious concern as local brokers are unable to provide underwriting for the primary market, prevent pricing gaps from dual-listed stocks or offer custodial services, which are essential to attracting foreign investors (Kenny and Moss, 1998).

Table 5. Descriptive statistics - the Sudan Stock Exchange, 1995–2006

DATA	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Primary market: funds raised (millions of dollars)	65.16	5.27	2.06	13.75	23.52	38.29	30.15	157.85	62.97	109.06	-- --	-- --
Secondary market: Listed companies	34	40	41	42	43	44	44	46	47	48	49	51
Secondary market: Shares traded (millions)	115.726	24.909	164.818	11.674	198.569	14.169	8,768.897	4,060.237	9,745.457	2,185.994	142.875	5,032.22
Market capitalization (millions of dollars)	44	32	139	111	237	392	457	593	741.22	2,058.42	3,241.64	3,563.49
Value traded (millions of dollars)	3.50	0.68	3.33	1.00	6.20	23.01	64.02	95.00	93.76	178.04	24.51	51.46
OTC market: Number of shares (millions)	0.485	2.064	2.332	3.386	3.996	3.583	226.955	351.364	167.252	791.922	-- --	-- --
RATIOS												
Market capitalization/ GDP (%)	-- --	-- --	-- --	1.32%	2.22%	3.40%	3.56%	4.02%	4.34%	6.96%	-- --	-- --
Market capitalization/ money + quasi-money (%)	0.00%	0.01%	0.02%	0.08%	0.03%	0.04%	0.47%	0.05%	0.14%	10.28%	-- --	-- --
Traded value / market capitalization (%)	7.98%	2.14%	2.39%	0.90%	2.86%	5.86%	14.01%	15.97%	12.65%	12.13%	0.75%	1.44%
OTC market / formal secondary market (%)	0.42%	8.29%	1.41%	29.00%	2.01%	25.29%	2.59%	8.65%	1.72%	36.23%	-- --	-- --

Source: Compiled by the authors from the Arab Monetary Fund, Bank of Sudan Annual Reports, and the Khartoum Stock Exchange website. Values for 2005, 2006 obtained from Al Zawya.

and 1998, had an annual value over US$23 million. Secondary market capitalization has also risen from an initial US$44 million in 1995 to US$2,058.42 million in 2004 and levels of secondary trading have also increased, although to a lesser extent (US$3.5m in 1995 to US$178.04m in 2004). Activity in the fledgling OTC market is often less than 10% of that on the formal stock exchange. Both the market capitalization to GDP ratio and the market capitalization to money plus quasi-money ratio are critical in evaluating the impact of the market faced by the local business community wishing to raise funds. The market capitalization to GDP ratio is extremely low, less than 7%, which is in line with many small developing African markets (Piesse and Hearn, 2005). Liquidity is also very low on the Khartoum Stock Exchange, although there is a notable increase in the turnover ratio from less than 7% prior to 2000 to over 14% following the introduction of government finance certificates in 2001 that increased domestic awareness of exchange-based investment products (KSE Annual Report, 2004).

The market capitalization to money plus quasi-money ratio confirms that the stock market is very small, and highlights the relative size and dominance of the banking system in the provision of corporate finance. Relationship-based bank finance dramatically increased from US$20 million in 1998 to US$4,860 million in 2006. Murabaha contracts are the most common form of finance, accounting for over 39% of funding, while musharaka contracts often account for between 20% and 30% of funding resources. Mudarabah and salam contractual arrangements are considerably less common, and each generally accounts for up to 6% of banking sector funding. Finally, other more specialized forms of contractual arrangements (including ijara and mugwala contracts) together account for the residual 12-20% of bank-based funding. Financing by murabaha contracts had the biggest increase in absolute terms between 1998 and 2006, although the relative proportions provided by each contract type remained relatively constant.

5. Data and methodology

5.1 Data

All data have been obtained through internet-based sources, including the Arabic and English language areas of the Khartoum Stock Exchange and the Arab Monetary Fund (AMF) websites. Monthly stock prices for Sudatel's Khartoum listing are from Khartoum via the AMF. Monthly stock prices, dividend and corporate action details for the secondary listings in Bahrain and Abu Dhabi are from the exchange

websites and Bloomberg. The total returns indices for the Khartoum and Abu Dhabi listed stocks were generated using the Standard & Poor's (S&P) method. Exchange rates and total returns are from Datastream and include the S&P Saudi Arabia, S&P Bahrain, S&P Egypt, S&P Oman and the MSCI World indices.

5.2 Cost of Equity Measurement

Two different methods are used to estimate the cost of equity for the Sudatel stock listed on the Abu Dhabi and Khartoum Stock Exchanges. The first method is based on the mean-variance framework proposed by Markowitz (1959) and the Capital Asset Pricing Model (CAPM) of Sharpe (1964) and Lintner (1965). This paper follows Collins and Abrahamson (2006) where the beta measure obtained using linear regression is replaced by a ratio of the risk of the stock, or standard deviation, to the market. As in Collins and Abrahamson (2006), the MSCI World index denominated in Saudi Arabian Rials represents the market and a one-month Saudi Arabian yield is used to proxy the risk-free rate. All returns series are in Saudi Rials.

Collins and Abrahamson (2006) assume market equilibrium under conditions of risk (Sharpe, 1964) and take account of both options faced by investors and the optimal valuation of assets (Lintner, 1965). Following Mossin (1969) and Cheng and Grauer (1980), the simple model can be summarized with the cost of equity measure as:

$$CE_i = R_f + RM_i(R_w), \quad (1)$$

where CE = the cost of equity;

R_f = the international risk-free rate, which in this case is the Saudi Arabian

4-week Treasury yield;

RP_w = the world market risk premium, which is taken to be 4.43% and is calculated over a long period from 1991 to 2008 in line with the estimation by Karolyi and Stulz (2003) for a similar period.

The standard deviation is a measure of risk, and incorporates both systematic (un-diversifiable market-related) and non-systematic risk (diversifiable company or industry-specific risk). Since this is a symmetric measure, equal weight is given to upside and downside risk and thus a cost of equity measure provides an upper bound measure. Hence, RM_i in equation (1) is equal to σ_i / σ_w, where σ_i is the standard

deviation of the total returns of the Khartoum or the Abu Dhabi listing of Sudatel, and σ_w is the standard deviation of the MSCI World index.

As noted above, the use of the CAPM presents a major difficulty in Islamic markets as the risk-free rate of interest cannot be specified. Mean-variance theory assumes risk-free borrowing and lending and the construction of a market portfolio in returns that are in excess of the risk-free rate. However, this problem may be circumvented by using the Saudi Arabian risk-free rate. Saudi Arabia operates a split system, operating in both Islamic and Western financial markets. Given the Saudi market dominates the MENA region and sovereign short-term debt is both available and traded, the Saudi Arabian rate is a good estimate of a regional risk-free rate. A more serious problem is that mean-variance theory rests upon the assumption of weak-form efficiency, which is a critical assumption in the CAPM. Difficulties arise here both in the context of emerging markets, where illiquidity, price-rigidity and poor regulatory and governance standards frequently cause stock returns to suffer from high-order autocorrelation, and in Islamic markets that are characterized by strong-form efficiency, as discussed earlier.

The second method used to estimate the cost of equity is a dividend capitalization model (Gordon and Shapiro, 1956), which is a more appropriate valuation method in an Islamic context as no use is made of interest rates or yields. Here, CE is again the cost of equity, where:

$$CE = \left[\frac{\textit{Dividends per share (for the next year)}}{\textit{Current Market Value of Stock}}\right] + \text{(Expected Dividends Growth Rate)} \quad , \qquad (2)$$

The retention ratio in equation (3) and return on equity in equation (4) are calculated using balance sheet data,

$$\textit{Plowback ratio} = 1 - \textit{Payout ratio} = 1 - \left[\frac{\textit{Dividends per share}}{\textit{Earnings per share}}\right] \quad , \qquad (3)$$

and

$$\textit{Return on equity} = \left[\frac{\textit{Earnings per share}}{\textit{Book equity per share}}\right] \quad , \qquad (4)$$

and the product used in equation (2).[8] The assumption that the owner of an equity is entitled to a stream of regular cash-flow payments remains slightly at odds with the profit-and-loss sharing principle but this method represents the closest to shari'ya compliant finance law.

[8] See Brealey, Myers and Allen (2008) for a detailed analysis.

5.3 Dual listing and the transactions costs faced by potential investors

The transactions costs between the Khartoum and Abu Dhabi listings of Sudatel stock are estimated using the difference in the returns between a minimum-variance optimized portfolio, which has no constraints on the weights given to each asset, and a portfolio with equal asset weights. Where the asset weights are equal, both assets are assumed to be fully integrated and thus have the same mean and variance (Sargan, 1961). If there are no transactions costs, then the expectation is that dual-listed stocks would be held in equal proportions. Any deviation from this suggests that transactions costs between the markets listing these stocks are greater than zero.

Table 6. Bank financing in Sudan, 1998–2006

Mode of financing	1998	1999	2000	2001	2002	2003	2004	2005	2006
Murabaha	54.37%	49.12%	33.74%	39.53%	35.92%	44.64%	38.52%	43.29%	53.37%
Musharaka	21.11%	30.80%	42.88%	30.97%	27.88%	23.22%	31.99%	30.82%	20.38%
Murdaraba	5.97%	4.07%	3.51%	6.25%	4.63%	5.71%	5.74%	4.20%	5.25%
Salam	6.61%	5.02%	3.35%	4.99%	3.32%	4.80%	2.95%	2.09%	1.28%
Others*	11.94%	10.99%	16.52%	18.26%	28.26%	21.63%	20.80%	19.60%	19.72%
Total (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%
Total (millions of dollars)	20.41	285.86	393.74	559.95	787.89	1,082.83	1,706.25	3,014.43	4,861.51

Source: Compiled by the authors from the Bank of Sudan Annual Reports (1999–2006)

Note: (1) The 'others' mode of financing includes the ijara and mugawla modes.

6. Results

6.1 The cost of equity

Table 7 presents estimates of the cost of equity for Sudatel stock on both the Khartoum and Abu Dhabi Stock Exchanges, plus estimates of the cost of equity for the two rival telecommunications companies in the region: Zain and Orascom. The estimates are generated using the two methods outlined above. Both models show a decrease in the cost of equity from the secondary listing of the Sudatel stock on the Abu Dhabi exchange. The decrease in the cost of equity calculated by the Collins and Abrahamson (2006) model is in excess of 5%, with values for Khartoum and Abu Dhabi being 27.89% and 22.76% respectively. However, owing to the short sample and consequently relatively high volatility the values are less reliable than those from the Gordon and

Shapiro (1956) approach, which indicate considerable and persistent differences between the costs of equity for the two listings. The cost of equity in Abu Dhabi is lower by as much as 199.7 basis points in 2004, falling to 174.60 in 2005, and 52.60 in 2006. These results indicate that the listing in Abu Dhabi has enabled Sudatel to obtain a cheaper source of capital with which to finance its expansion into the international telecommunications markets.

Table 7. The cost of equity

Stock	Listing	Gordon and Shapiro (1956) Dividend capitalization method					Collins & Abrahamson (2006)
		2003	**2004**	**2005**	**2006**	**2007**	**2008**
Orascom	Egypt	16.42%	31.18%	36.25%	-- --	33.61%	20.06%
Zain (MTC)	Kuwait	12.23%	10.34%	-- --	13.58%	10.46%	-- --
Sudatel	Khartoum	24.89%	29.15%	26.46%	55.33%	13.07%	27.89%
Sudatel	Abu Dhabi	24.89%	9.18%	9.00%	50.07%	13.36%	22.76%

Note: (1) The costs of equity for 2003–2007 were estimated using the Gordon and Shapiro (1956) method.
(2) The costs of equity for 2008 were estimated at May 2008 using the Collins & Abrahamson (2006) method, based on annualized risk premiums and risk-free rate of return (Saudi 4-week T-Bill yield).
(3) The dividend capitalization method assumes constant (mean) rate of growth rate of dividends of 6%
(4) The Collins & Abrahamson (2006) measure assumes a world market risk premium over the Saudi risk-free rate of 4.43%.

It is particularly instructive to compare the costs of equity of Sudatel with those of its two main regional competitors, Zain and Orascom. Zain has a primary listing on the Kuwait Stock Exchange, the largest MENA bourse, and has a very low cost of equity ranging from 12.23% in 2003 to 10.46% in 2007. The picture is quite different for Orascom, listed on the Egypt exchange, where the cost of equity has actually increased from 16.42% in 2003 to 33.61% in 2007. This significantly higher value explains the recent decision by the company to make a secondary listing of a Global Depository Receipt on the London Stock Exchange. The differential costs of capital may also explain, at least in part, the different expansion strategies followed by the three firms. Zain has the lowest cost of capital and has achieved a dominant position across Africa and the Middle East. In contrast, the expansion of both Orascom, which has focused primarily on North African markets, and Sudatel has been limited by their ability to raise equity capital at competitive rates (Al Zawya, 2008).

Other differences also impact upon the cost of equity financing. Both Zain and Orascom adhere to internationally accepted corporate governance regimes with two-tier boards (executive and non-executive directors), a split between the roles of the chairman and the chief executive officer (CEO), and the presence of an independent audit committee. Information disclosure is timely and in accordance with OECD corporate governance guidelines. This is not the case with Sudatel, which operates with a single board, and little to differentiate between directors' roles or the positions of chairman and CEO. The board is composed of stakeholders, with the government, the Bank of Sudan and two Sudanese public investment firms accounting for seven of the twelve directors, following the principles implied by profit-and-loss sharing and its influence on governance. A further two directorships are held by Middle Eastern affiliate firms.

6.2 Dual Listing and Transactions Costs

The Sudatel stock returns on both the Khartoum and the Abu Dhabi Exchanges were highly volatile over the period, with the returns showing standard deviations of 16.32% and 13.32% respectively – see table 8. Comparisons are provided with S&P market indices for other regional markets. The mean return for the Khartoum listing (1.82%) is substantially lower than that of the Abu Dhabi listing (2.29%), hence the former listing offers investors a poorer trade-off between risk and return than the latter. Neither asset compares favourably to the mean risk-return characteristics of the regional market indices of Saudi Arabia, Bahrain, Egypt and Oman, and all contrast poorly to the MSCI World index. This provides some indication of the degree of segmentation apparent between the Sudanese market, represented by Sudatel, and the MENA region. The returns series also exhibit high levels of autocorrelation[9] implying that these series are not weak-form efficient which is a significant deviation from the implicit assumption of strong-form efficiency and full informational revelation of prices within a fully *shari'ya* compliant market. This is a common feature of emerging markets due to price rigidity caused by illiquidity (Bekaert and Harvey, 1995).

The correlations in Table 8 between both Sudatel listed assets and the other regional markets are very low and often negative. However, the Abu Dhabi asset exhibits larger negative correlations than its Khartoum counterpart suggesting substantial opportunities for risk diversification.

[9] Autocorrelation results available from authors upon request

Consequently, this is a more attractive asset for risk diversification in investor portfolios and increases the likelihood that Sudatel will be able to access additional finance.

Table 8. Risk-return tradeoffs and correlations

Stock (market)	Sudatel (Abu Dhabi)	Sudatel (Khartoum)	S&P Saudi Arabia	S&P Bahrain	S&P Egypt	S&P Oman	MSCI World
Descriptive statistics							
Mean	2.29%	1.82%	2.60%	2.34%	5.12%	3.25%	1.36%
Std. Dev.	13.32%	16.32%	9.53%	4.00%	9.10%	4.99%	2.72%
Correlations							
Sudatel (Abu Dhabi)	100.00%	-- --	-- --	-- --	-- --	-- --	-- --
Sudatel (Khartoum)	34.11%	100.00%	-- --	-- --	-- --	-- --	-- --
S&P Saudi Arabia	- 15.05%	- 2.76%	100.00%	-- --	-- --	-- --	-- --
S&P Bahrain	- 9.02%	3.42%	22.98%	100.00%	-- --	-- --	-- --
S&P Egypt	- 5.47%	7.45%	23.17%	38.74%	100.00%	-- --	-- --
S&P Oman	- 27.68%	- 14.94%	39.99%	27.18%	28.82%	100.00%	-- --
MSCI World	0.65%	1.70%	- 2.09%	- 6.15%	11.28%	4.05%	100.00%

Source: Compiled by the authors fom Datastream. Sudatel (Khartoum) are from the AMF and Sudatel (Abu Dhabi) are from Bloomberg.

Note: (1) All data reported in SAR end of period values
(2) The correlations are between the total returns indices for each respective market.
(3) The S&P Saudi Arabia, Egypt, Oman and Bahrain indices, as well as the MSCI World index, are sourced from Datastream.
(4) The Sudatel Abu Dhabi and Khartoum series are constructed in accordance with S&P index methodology using data obtained from the Arab Monetary Fund.

Estimates of the costs faced by investors from holding the Sudatel Khartoum asset in preference to the Abu Dhabi asset are estimated in table 9. These estimates show that the transactions costs facing investors in Sudatel between the Khartoum and Abu Dhabi exchanges were both high and pervasive. The annualized average premium measured in basis points ranged from 49.51 in 2004, to 42.64 in 2005, to 88.50 in 2006, and to value of 56.19 in 2008. These results are in line with the earlier findings concerning cost of equity between the two listings and reflect the better institutional environment in Abu Dhabi, which reduces informational asymmetries between the firm and its investors, as well as access to a wider and more diversified pool of investors. The considerable premium and then gradual reduction over time is partly the result of the improvement in standards of national accounting and auditing in Sudan, which had not only been misaligned with world standards but also poorly applied in practice, a common feature of developing economy financial

markets. In addition, many investors in the region have gained a greater understanding of the valuation and performance metrics and are able to reflect this information in terms of demand and prices.

Table 9. Sudatel Listings on the Khartoum and Abu Dhabi Stock Exchanges

	2004	2005	2006	2007	2008
Transactions cost premium(basis points): Sudatel Abu Dhabi versus Khartoum	49.51	42.64	88.50	11.14	56.19

Note: All data are in SAR end of period values, and all strategies are evaluated in Saudi Rials

These results indicate that equity investment in Sudatel is unlikely to follow the traditional pattern of portfolio investment elsewhere. While the firm has achieved a lower cost of equity by listing in Abu Dhabi and gained access to international investors from the MENA region the listing in Bahrain suggests that large individual blockholders have a particularly important role to play. Despite the increased levels of market regulation, stricter disclosure requirements and higher standards of auditing and accounting that have contributed to the lower cost of equity for Abu Dhabi listed stock compared to that in Khartoum, the company is more likely to seek investments from large blockholders. Equity investment from large individual blockholders would reduce concerns about lack of regulation, particularly with regard to the protection of minority shareholders, whose presence could be deemed to be speculative and thus contrary to Islamic *shari'ya* principles. Further, the presence of large blockholders and controlling groups would satisfy the profit-and-loss sharing principle of Islamic *shari'ya* investment where preference is given to those parties involved in the active management and risk-sharing of firms.

7. Policy implications

A critical factor in the expansion of TNCs from emerging markets is the ability to access cost-effective finance to facilitate entry into competitive product markets. Firms that are sufficiently large and well-capitalized are able to diversify their financing strategies through a form of institutional arbitrage between markets. This is especially important for firms originating from emerging countries in which domestic financial markets are often highly segmented from world capital markets, with associated considerably higher costs of equity. Those firms which are able to afford the additional listing and disclosure costs in markets

with stronger regulation and regulatory enforcement are able to mitigate the effects of information asymmetry that discourages investors and achieve a lower cost of equity and capital. However, those firms that seek to fulfil their financing requirements in compliance with Islamic *shari'ya* directives are faced with an additional constraint concerning the financing location and products available. The very institutional design of markets that are fully compliant to Islamic *shari'ya* directives render them distinct from those markets that offer either a combination of Western and Islamic instruments or offer solely Western financing solutions. This segmentation means firms are only able to access a small pool of investors, with little prospect for diversification and consequently a higher cost of equity and capital. The high costs of equity reduce the profitability of potential development projects and reduces the ability of the firm to compete in international product markets.

Mindful of these issues, there is considerable scope for policy debate amongst MENA market regulators concerning optimal institutional design and the benefits for indigenous firms seeking to raise capital from markets that are either fully *shari'ya* compliant or dualistic in their nature. Many MENA markets operate a dualistic approach in trading Western and Islamic financial products. This enables firms to benefit from accessing a wider and more cost effective pool of capital while enabling organizations to retain compliance with Islamic *shari'ya* financing principles. Markets that are fully *shari'ya* compliant are very reliant on all participants having a high level of Islamic education and social justice in order to comply with prescriptions relating to alleviation of moral hazard and strong-form informational efficiency. This way both borrowers and investors are able to engage in a partnership based on the profit-and-loss sharing principle of Islamic Finance.

8. Conclusions

The rapid overseas expansion of Sudatel into telecommunications markets in the Maghreb region and West Africa is particularly interesting as the company is a prominent example of an TNC that is not only from an emerging market but is also one that adheres to shari'ya compliant financing principles. The main drivers for this expansion have been the recent deregulation of the telecommunications sector across Africa and the Middle East, the privatization of former State-owned operators, and the liberalization of economies in many countries that has allowed foreign ownership and investment.

The Khartoum Stock Exchange is the primary source of equity finance for domestic Sudanese firms, but the high costs of capital leads to a lack of competitiveness, particularly for firms that can list on foreign markets where there are stronger institutions. In contrast, the Abu Dhabi and Bahrain Exchanges attract a considerably higher proportion of Arab and foreign investors both regionally and globally. The share of foreign traded value in Bahrain increased from 35% in 2003 to 48% in 2007, although this exchange lacks the size and institutional infrastructure of the Abu Dhabi market. The capitalization and turnover ratios clearly reflect the difference, with capitalization on the Abu Dhabi market thirty times that of Bahrain and turnover over ten times in 2007.

A major challenge of Sudatel's regional expansion has been access to low cost capital that is shari'ya compliant. Since privatization in 1997, the company's ownership has been diversified and it is listed on the Khartoum Stock Exchange. Additional listings in Abu Dhabi and Bahrain have followed, where the former was designed to attract a wider audience of Arab investors and the latter directed towards high net-worth individual investors and/or blockholders. As a result of the cross-listing in Abu Dhabi, Sudatel escaped from the liquidity constraints in the home market and thereby achieved a reduction in the cost of capital that has made profitable expansion overseas a reasonable prospect.

In summary, Sudatel is likely to continue to source finance for international expansion from the regional financial markets in the Middle East as these markets offer shari'ya compliant products and cheaper sources of capital than are available in Sudan. However, markets that are completely shari'ya compliant are likely to be more segmented due to the global dominance of Western financial principles. In addition, there are also inefficiencies characteristic of emerging markets, such as institutional infrastructure, particularly regulation, and international standards of corporate governance. Consequently, Sudatel is most likely to fund future growth and expansion by accessing finance Islamic shari'ya compliant products offered by Western-style institutions, whether they are banking or securities companies in the MENA region markets.

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